

WHAT IS CLAIMED IS:

1 1. A method for making a thin film semi-conductor comprising
2 the steps of:
3 forming a first porous layer having a first porosity on a surface
4 of a substrate;
5 forming a second porous layer within or underneath said first
6 porous layer having a second porosity higher than said first porosity;
7 forming at least one semi-conductor thin film on said surface;
8 and
9 separating said semi-conductor film from said substrate along a
10 line of relative weakness defined in or adjacent one of said first and second porous
11 layers,
12 wherein said first porous layer and said second porous layer are
13 formed by anodizing.

1 2. A thin film semi-conductor formed by:
2 providing a semi-conductor substrate having a surface;
3 forming a first porous layer having a first porosity on a surface
4 of said substrate;
5 forming a second porous layer within or underneath said first
6 porous layer having a second porosity higher than said first porosity;
7 forming at least one semi-conductor thin film on said surface;
8 and
9 separating said semi-conductor film from said substrate along a
10 line of relative weakness defined in or adjacent one of said first and second porous
11 layers to obtain said thin film semi-conductor,
12 wherein said first porous layer and said second porous layer are
13 formed by anodizing.

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1 3. A thin film semi-conductor formed by:
2 providing a semi-conductor substrate having a surface;
3 anodizing said semi-conductor substrate at a first current
4 density to provide a first porous layer adjacent said surface having a first porosity;
5 anodizing said semi-conductor substrate at a second current
6 density higher than said first current density to provide a second porous layer adjacent
7 said first porous layer opposite said surface, said second porous layer having a second
8 porosity greater than said first porosity;
9 annealing said semi-conductor substrate in a hydrogen
10 atmosphere after said step of anodizing said semi-conductor substrate to provide said
11 second porous layer; and
12 forming at least one semi-conductor film on said surface.

1 4. A thin film semi-conductor formed by:
2 providing a semi-conductor substrate having a surface;
3 forming a first porous layer adjacent said surface having a first
4 porosity;
5 forming a second porous layer within said first porous layer
6 having a second porosity higher than said first porosity;
7 forming at least one semi-conductor film on said surface; and
8 separating said semi-conductor film from said semi-conductor
9 substrate along a line of relative weakness defined in or adjacent one of said first and
second porous layers.

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